Journal of BIOENERGETICS AND BIOMEMBRANES

CONTENTS

Volume 16, Number 1, February 1984

SHORT REVIEWS

Energetics of the First Steps of Phage Infection. *Bernard Labedan and Lucienne Letellier* 1

New Molecular Aspects of Energy-Transducing Protein Complexes. *Nathan Nelson and Shulamit Cidon* 11

RESEARCH ARTICLES

Nonequilibration of Membrane-Associated Protons with the Internal Aqueous Space in Dark-Maintained Chloroplast Thylakoids. *Joseph A. Laszlo, Gary M. Baker, and Richard A. Dilley* 37

The Thermodynamic Efficiency of the Ca^{2+}–Mg^{2+}-ATPase is One Hundred Percent. *Kenneth Trevorrow and Duncan H. Haynes* 53

Respiratory Control in *Micrococcus lysodeikticus*. *Mel Rosenberg and Ilan Friedberg* 61

INSTRUCTIONS TO CONTRIBUTORS 69

Volume 16, Number 2, April 1984

SHORT REVIEW

Interactions in Cytochrome Oxidase: Functions and Structure. *Jo A. Freedman and Samuel H. P. Chan* 75

RESEARCH ARTICLES

Phosphate Transport, Membrane Potential, and Movements of Calcium in Rat Liver Mitochondria. *Erzsébet Ligeti and Gergely L. Lukács.* 101

Steady-State Kinetics of the Overall Oxidative Phosphorylation Reaction in Heart Mitochondria. Determination of the Coupling Relationships Between the Respiratory Reactions and Miscellaneous Observations Concerning Rate-Limiting Steps. *Clinton D. Stoner...* 115

A Link Between Transport and Plasma Membrane Redox System(s) in Carrot Cells. *Prakash C. Misra, Theodore A. Craig, and Frederick L. Crane* 143

On the Mechanism of Inhibition of NADH Oxidase by Ubiquinone-3. *Laura Landi, Petronio Pasquali, Luciana Cabrini, Anna Maria Sechi, and Giorgio Lenaz* 153

INSTRUCTIONS TO CONTRIBUTORS 167

Volume 16, Number 3, June 1984

Correlation Between Membrane-Localized Protons and Flash-Driven ATP Formation in Chloroplast Thylakoids. *R. A. Dilley and U. Schreiber* 173

Effects of Pyridoxal Phosphate Treatment on the (Na + K)-ATPase. *Joseph D. Robinson* 195

Inhibition of Plasma Membrane NADH Dehydrogenase by Adriamycin and Related Anthracycline Antibiotics. *Iris L. Sun, F. L. Crane, H. Löw, and C. Grebing* 209

Lack of Immunological Cross Reactivity Between the Transport Enzymes ($Na^+ + K^+$)-ATPase and ($K^+ + H^+$)-ATPase. *W. H. M. Peters, A. G. H. Ederveen, M. H. L. Salden, J. J. H. H. M. de Pont, and S. L. Bonting* 223

INSTRUCTIONS TO CONTRIBUTORS 233

Volume 16, Number 4, August 1984

SHORT REVIEW

Evidence for Direct Roles of Calcium in Photosynthesis. *Jerry J. Brand and David W. Becker* 239

RESEARCH ARTICLES

On the Mechanism of H^+ Translocation by Mitochondrial H^+-ATPase. Studies with Chemical Modifier of Tyrosine Residues. *F. Guerrieri, A. Yagi, T. Yagi, and S. Papa* 251

Amino Group Modification of $(Na^+ + K^+)$-ATPase. *J. J. H. H. M. De Pont, S. E. Van Emst-De Vries, and S. L. Bonting* 263

The Kinetics of P515 in Relation to the Lipid Composition of the Thylakoid Membrane. *R. L. A. Peters, O. van Kooten, and W. J. Vredenberg* 283

The Protein Composition of the Cytoplasmic Membrane of Aerobically and Anaerobically Grown *Escherichia coli*. *Richard G. F. Visser, Klaas J. Hellingwerf, and Wil N. Konings* 295

INSTRUCTIONS TO CONTRIBUTORS 309

Volume 16, Numbers 5/6, December 1984

David E. Green Memorial Issue

INTRODUCTION

David E. Green: A Personal Recollection. *F. M. Huennekens* 315

SHORT REVIEW

Crystallization of Intrinsic Membrane Proteins. *Takayuki Ozawa* 321

RESEARCH ARTICLES

Three Proton Pumps, Morphology and Movements. *J. N. Telford, T. A. Langworthy, and E. Racker* 335

Local Anesthetics: A New Class of Partial Inhibitors of Mitochondrial ATPase. *A. Adade, D. Chignell, and G. Vanderkooi* 353

Effects of Affinity-Purified Antibodies on the Ca^{2+} Pumping ATPase of Erythrocyte Membranes. *A. K. Verma, John T. Penniston, Schmuel Muallem, and Virgilio Lew* 365

Effects of Quinine on K^+ Transport in Heart Mitochondria. *Dennis W. Jung, Tahira Farooqui, Eric Utz, and Gerald P. Brierley* 379

Temperature Dependence of Mitochondrial Oligomycin-Sensitive Proton Transport ATPase. *G. Solaini, A. Baracca, G. Parenti Castelli, and G. Lenaz* 391

Relationships of Inosine Triphosphate and Bicarbonate Effects on F_1 ATPase to the Binding Change Mechanism. *Vladimir N. Kasho and Paul D. Boyer* 407

Oxidations in Kidney Mitochondria of Heat-Exposed Rats: Regulation by Cytochrome *c*. *R. S. Puranam, V. Shivaswamy, C. K. Ramakrishna Kurup, and T. Ramasarma* 421

Synthesis and Degradation of Interconvertible Enzymes. Kinetic Equations of a Model System. *David M. Gibson, Jean Hamilton Steinrauf, and Rex A. Parker* 433

Monoclonal Antibodies to the $Ca^{2+} + Mg^{2+}$-Dependent ATPase of Sarcoplasmic Reticulum Identify Polymorphic Forms of the Enzyme and Indicate the Presence in the Enzyme of a Classical High-Affinity Ca^{2+} Binding Site. *E. Zubrzycka-Gaarn, G. MacDonald, L. Phillips, A. Jorgensen, and D. MacLennan* 441

Environment of the Sulfhydryl Groups in Bovine Heart Mitochondrial H^+-ATPase. *D. Griffiths, M. Pringle, J. Hughes, and D. R. Sanadi* 465

Activation Studies by Phospholipids on the Purified Cytochrome c_4:*o* Oxidase from *Azotobacter vinelandii*. *T.-Y. Wong and P. Jurtshuk, Jr.* 477

Decavanadate Is Responsible for Vanadate-Induced Two-Dimensional Crystals in Sarcoplasmic Reticulum. *Andreas Maurer and Sidney Fleischer* 491

Ionic Requirements for Taurocholate Transport in Rat Liver Plasma Membrane Vesicles. *F. A. Simion, B. Fleischer, and S. Fleischer* 507

A Transmembranous NADH-Dehydrogenase in Human Erythrocyte Membranes. *C. Grebing, F. L. Crane, H. Löw, and K. Hall* 517

The Oligomycin Sensitivity Conferring Protein (OSCP) of Beef Heart Mitochondria: Studies of Its Binding to F_1 and Its Function. *T. Hundal, B. Norling, and L. Ernster* 535

Antibody Preference for the Catalytically Active Form of β-Hydroxy-β-Methylglutaryl Coenzyme A Reductase. *Richard E. Dugan and John W. Porter* 551

Biogenesis of Mitochondria: Defective Yeast H^+-ATPase Assembled in the Absence of Mitochondrial Protein Synthesis Is Membrane Associated. *J. M. Orian, R. G. Hadikusumo, S. Marzuki, and A. W. Linnane* 561

Properties of a Transplasma Membrane Electron Transport System in HeLa Cells. *Iris L. Sun, F. L. Crane, C. Grebing, and H. Löw* 583

Saturated Amines and Diamines as Substrates Which Inhibit Beef Liver Mitochondrial Monoamine Oxidase. *Richard W. Von Korff and Alan R. Wolfe* 597

A Protein Activator of the Plasma Membrane Ca^{++}-ATPase of Heart Sarcolemma. *Leslie J. Reinlib, Arthur F. Clark, and Ernesto Carafoli* 611

INSTRUCTIONS TO CONTRIBUTORS 623

AUTHOR INDEX TO VOLUME 16 629